

CLAIMS

[c1] A method in a computer system for providing dynamic addresses for devices, the method comprising:

receiving a domain name associated with a device;

identifying a dynamic address name associated with the received domain name;

sending to a dynamic address system the identified dynamic address name, the dynamic address system having a mapping from dynamic address names to addresses wherein devices have a dynamic address name and register their address with the dynamic address system;

receiving from the dynamic address system an address for the identified dynamic address name; and

sending the received address as the address for the device associated with the domain name.

[c2] The method of claim 1 wherein the dynamic address system supports instant messaging and the dynamic address name identifies a user of the instant messaging system, the user being a device associated with the address.

[c3] The method of claim 1 wherein the device is connected to the Internet.

[c4] The method of claim 3 wherein the device is a web server.

- [c5] The method of claim 1 wherein the address is an IP address.

- [c6] The method of claim 1 wherein the computer system is a domain name server.

- [c7] The method of claim 6 wherein the domain name server is a top-level domain name server.

- [c8] The method of claim 6 wherein the domain name server is a second-level domain name server.

- [c9] The method of claim 1 wherein the sending of the received address includes sending an indication not to cache the received address.

- [c10] The method of claim 1 wherein the sending of the received address including sending an indicator to cache the received address for a certain amount of time.

- [c11] The method of claim 1 including sending to the dynamic address system authentication information along with the identified dynamic address name so that the dynamic address system can authenticate the computer system.

- [c12] A method in a computer system for mapping domain names to addresses, the method comprising:
 - providing a domain name mapping of domain names to intermediate identifiers;

 - providing an address mapping of intermediate identifiers to addresses;

 - receiving a domain name;

identifying from the domain name mapping an intermediate identifier associated with the received domain name;

identifying from the address mapping an address associated with the identified intermediate identifier; and

sending the identified address as the address of the received domain name.

[c13] The method of claim 12 wherein the intermediate identifier is a telephone number.

[c14] The method of claim 13 wherein the address mapping maps telephone numbers to addresses of servers where a call to the telephone number is a local call.

[c15] The method of claim 13 wherein the telephone number is part of the domain name.

[c16] The method of claim 13 wherein a second-level domain name is a telephone number.

[c17] The method of claim 13 wherein a third-level domain name is a telephone number.

[c18] The method of claim 13 wherein the telephone number is a parameter of a uniform resource identifier that includes the domain name.

[c19] The method of claim 12 wherein the intermediate identifier is a dynamic address name.

[c20] The method of claim 19 wherein the dynamic address name is a name of a user of an instant messaging system.

[c21] The method of claim 19 wherein the address mapping is providing by an dynamic address system.

[c22] The method of claim 21 wherein the dynamic address system is an instant messaging system.

[c23] A method in a computer system for providing dynamic addresses for devices, the method comprising:

providing a mapping from dynamic address names to addresses;

receiving from a domain name server a dynamic address name associated with a device;

identifying from the provided mapping an address to which the received dynamic address name maps; and

sending to the domain name server the identified address

so that the domain name server can provide the identified address as an address associated with the device.

[c24] The method of claim 23 wherein the domain name server maps domain names to dynamic address names.

[c25] The method of claim 23 wherein the device is connected to the Internet.

[c26] The method of claim 23 wherein the device is a web server.

[c27] The method of claim 23 wherein the computer system is an instant messaging system.

[c28] The method of claim 23 including receiving an new address for a dynamic address name and updating the mapping to map the dynamic address name to the new address.

[c29] The method of claim 23 wherein the addresses are IP addresses.

[c30] The method of claim 23 wherein the domain name server is a top-level domain name server.

[c31] The method of claim 23 wherein the domain name server is a second-level domain name server.

[c32] A method in a computer system for providing dynamic addresses for resources, the method comprising:

receiving a uniform resource identifier having a parameter that identifies a resource;

identifying a dynamic address name associated with the parameter;

sending to a dynamic address system the identified dynamic address name, the dynamic address system having a mapping from dynamic address names to addresses wherein resources have a dynamic address name and have their address registered with the dynamic address system;

receiving from the dynamic address system an address for the identified dynamic address name; and

sending the received address as the address for resource identified by the parameter.

[c33] The method of claim 32 wherein the resource is a device connected to the Internet.

[c34] The method of claim 32 wherein the computer system is a web site.

[c35] The method of claim 34 wherein the uniform resource identifier is received after a domain name server directs a resolution request for an address to the computer system.

[c36] The method of claim 35 wherein the domain name server is a second-level domain name server.

[c37] The method of claim 35 wherein the domain name server is a top-level domain name server.

[c38] The method of claim 32 wherein the address is an IP address.

[c39] The method of claim 32 wherein the dynamic address system is an instant messaging system and the dynamic address name identifies a web site that registered its address with the instant messaging system.

[c40] A method in a computer system for placing a telephone call over a network, the method comprising:

receiving a domain name from a client computer, the domain name being associated with a telephone number;

identifying an address of a telephone server associated with the telephone number associated with the domain name; and

sending the identified address to the client computer

wherein, when the client computer accesses the identified address, a telephone call is placed to the telephone number associated with the domain name.

[c41] The method of claim 40 wherein the telephone number is part of the domain name.

[c42] The method of claim 41 wherein the telephone number is a second-level domain name.

[c43] The method of claim 41 wherein the telephone number is a third-level domain name.

[c44] The method of claim 41 wherein the telephone number is dispersed throughout the domain name.

[c45] The method of claim 40 wherein the domain name identifies a name that is associated with at telephone number.

[c46] The method of claim 45 wherein the name is a name of a person.

[c47] The method of claim 45 wherein the name is a name of an organization.

[c48] The method of claim 45 wherein the name is a name of a business entity.

[c49] The method of claim 45 wherein the name is an alphabetic, numeric, or alphanumeric identifier.

[c50] The method of claim 45 wherein the resource is a web page.

[c51] The method of claim 40 wherein the telephone call is associated with a voice conversation.

[c52] The method of claim 40 wherein the telephone call is associated with a facsimile transmission.

[c53] A computer-readable medium containing a data structure having a domain name comprising:

a top-level domain name; and

another level domain name that identifies a telephone number to be called when the domain name is specified.

[c54] The computer-readable medium of claim 53 wherein the other level domain name contains the digits of the telephone number.

[c55] The computer-readable medium of claim 54 wherein the other level domain name contains the name of an entity to be called.

[c56] The computer-readable medium of claim 54 wherein the other level domain name is a second-level domain name.

[c57] The computer-readable medium of claim 54 wherein the other level domain name is a third-level domain name.

[c58] A method in a computer system for mapping a domain name with no associated address to an address, the method comprising:

receiving a domain name from a client;

determining whether an address is associated with the received domain name; and

when it is determined that an address is not associated with the received domain name,

sending a search request based on the domain name to a search engine;

receiving from the search engine an address associated with the search results; and

sending to the client the received address so that the client can access the search results.

[c59] The method of claim 58 wherein the address is an IP address.

[c60] The method of claim 58 wherein the computer system is a domain name server.

[c61] The method of claim 60 wherein the domain name server is a top-level domain name server.

[c62] The method of claim 60 wherein the domain name server is a second-level domain name server.

[c63] A method in a computer system for mapping a domain name with no associated address to an address, the method comprising:

receiving a domain name from a client;

determining whether an address is associated with the received domain name; and

when it is determined that an address is not associated with the received domain name, sending to the client an address of an alternate server computer so that the client can access the alternate server computer.

[c64] A method in a computer system for mapping a domain name with no associated address to an address, the method comprising:

receiving a domain name from a client computer;

determining whether an address is associated with the received domain name; and

when it is determined that an address is not associated with the received domain name, redirecting the client computer to a search engine that provides search results to the client computer based on the domain name.

[c65] The method of claim 64 wherein the address is an IP address.

[c66] The method of claim 64 wherein the computer system is a domain name server.

[c67] The method of claim 66 wherein the domain name server is a top-level domain name server.

[c68] The method of claim 66 wherein the domain name server is a second-level domain name server.

[c69] The method of claim 64 wherein an address is not associated with the received domain name because it is not a registered domain name.

[c70] A method in a computer system for mapping a domain name with no associated address to an address, the method comprising:

sending to a domain name server a domain name;

receiving from the domain name server an indication that the sent domain name is not mapped to an address; and

upon receiving the indication,

automatically sending to a search engine a search request based on the sent domain name; and

displaying search results provided by the search engine.

[c71] The method of claim 70 wherein a browser performs the automatic sending.

[c72] The method of claim 70 wherein a plug-in of a browser performs the automatic sending.